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EXAMINER	
TSOY, ELENA	

ART UNIT	PAPER NUMBER
1762	

DATE MAILED: 04/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/980,182	GROS, GEORG	
	Examiner	Art Unit	
	Elena Tsoy	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 March 2004* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *26-58* is/are pending in the application.

4a) Of the above claim(s) *36-45,51-54,57 and 58* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *26-35,46-50,55,56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Response to Amendment

Amendment filed on March 19, 2004 has been entered. New claims 51-58 have been added. Claims 26-58 are pending in the application. Claims 36-45, 51-54, 57 and 58 are withdrawn from consideration as directed to a non-elected.

Newly submitted claims 51-54, 57 and 58 depend on non-elected claims 36 and 41. Accordingly, claims 51-54, 57 and 58 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Election/Restrictions

Applicant's election with traverse of Group I, claims 26-35 and 46-50, on March 19, 2004 is acknowledged. The traversal is on the ground(s) that the common technical feature to all the independent claims is not obvious over Bristowe et al (US 4,213,837) because in contrast to coatings of Bristowe et al, the coatings of claimed invention are not per se be magnetic, but only electroconductive to be able to be welded as a so-called "welding primer". This is not found persuasive because the features upon which applicant relies (i.e., the coatings of claimed invention are not per se be magnetic, but only electroconductive to be able to be welded as a so-called "welding primer") are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The requirement is still deemed proper and is therefore made FINAL.

Claim Objections

1. Claim 46 is objected to because of the following informalities: Claim 46 should incorporate language of claim 36, because claim 36 is of non-selected Group II.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 26-35, 55 and 56 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 26, 31 recite "at least 20 % by weight of a conductive inorganic pigment selected from the group consisting of magnetizable oxides of iron, phosphates of iron, phosphides of iron, phosphates of aluminum, phosphides of aluminum, and graphite coated mica pigments to the surface of metallic substrate", which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as filed discloses that the coating composition comprises at least 20 wt % of a **mixture** of conductive pigments (See page 4 and examples) not at least 20 wt % of a single member of the recited Markush group.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 46, 49** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bristowe et al (US 4,213,837) for the reasons of record as set forth in Paragraph No. 3 of the Office Action mailed on December 2, 2003.

6. **Claims 46-50** stand rejected under 35 U.S.C. 103(a) as being unpatentable over Kulkarni (US 6,054,514) for the reasons of record as set forth in Paragraph No. 4 of the Office Action mailed on December 2, 2003.

7. **Claims 47, 48, 50** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bristowe et al (US 4,213,837 in view of Kulkarni (US 6,054,514) for the reasons of record as set forth in Paragraph No. 5 of the Office Action mailed on December 2, 2003.

8. **Claims 26, 29, 31, 34, 55, 56** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bristowe et al (US 4,213,837) in view of Sobata et al (US 4,939,034) and Palm et al (US 3,849,141).

As to claims 29, 34, 55, 56, Bristowe et al disclose a method of applying an anticorrosive layer (See column 7, line 27) to a metallic substrate (See column 7, line 9) such as steel Q-panel (a flexible steel sheet) (See column 7, line 13) comprising applying to the surface of the metallic substrate a coating mixture, said coating mixture consisting of a vinyl ester urethane (a polymeric organic binder) (See column 1, lines 9-11), a reactive vinyl monomer (a low-molecular liquid compound) (See column 6, lines 63-66; example 14); photosensitizer such as benzophenone (a compound forming free radicals under the influence of actinic radiation) (See column 10, line 37; column 12, line 11); and fillers such as antimony oxide, silicon oxides, magnesium oxides, boron oxides, and magnetic iron oxide (magnetite), which is an **electroconductive pigment**, as shown by Palm et al, column 6, lines 14-18), to alter physical properties of the final product (See column 7, lines 5-6), and curing the applied coating by heat or radiation (See column 7, lines 14-21) to

form the corrosion-resistant layer (See column 7, lines 27-28). The coating may be cured by radiation right after applying to the metallic surface (See column 12, lines 13-14).

The Examiner's Note: thermal post-curing is not addressed because it is *optional*.

Bristowe et al fail to teach that the coating mixture comprises at least 20 wt % of the conductive inorganic pigment (Claims 26, 31).

Sobata et al teach that generally electroconductive pigments such as iron phosphide (See column 11, lines 40-43) or **any** other electroconductive pigments in amount of 15-85 wt % (See column 11, lines 44-57) and other pigments such as aluminum tripolyphosphate pigment in an amount of 0-70 wt % of (See column 11, lines 62-65; column 12, lines 48-59) in a coating composition provide anti-corrosion effect (See column 11, lines 13-57).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used electroconductive magnetic iron oxide pigments in a coating mixture of Bristowe et al in large amounts to provide anti-corrosion effect, as taught by Sobata et al.

It is well known in the art that concentration limitations are result-effective parameters in a coating process.

It is held that it is not inventive to discover the optimum or workable ranges of result-effective variables by routine experimentation. In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977). See also In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant concentration parameters of a conductive inorganic, including claimed at least 20 wt %, in a method of Bristowe et al in view of Sobata et al through routine experimentation in the absence of a showing of criticality.

As to claimed properties, the corrosion-resistant layer in Bristowe et al in view of Sobata et al would have claimed properties, i.e. it is firm, hard, tough and slidable (i.e. smooth, see specification, page 4) since the layer is produced by a method identical or substantially identical to that of claimed invention. It is held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, *claimed properties or functions are presumed to be inherent.* See MPEP 2111.02, 2112.01. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

9. **Claims 26-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kulkarni (US 6,054,514) in view of Sobata et al (US 4,939,034).

Kulkarni discloses a method of applying an anticorrosive layer to a metallic substrate comprising applying to the surface of the metallic substrate such as cold rolled steel Q-panel (a flexible steel sheet) (See column 5, lines 53-54)a coating mixture, said coating mixture comprising a polymer of acrylics (a polymeric organic binder), a monomer of acrylics (a low-molecular liquid compound) and oligomer of acrylics (See column 1, lines 11-19; column 10, lines 9-16); conductive inorganic such as iron oxides, carbon fibers, aluminum tripolyphosphate (phosphate of aluminum) (See column 8, lines 21-22; column 10, lines 43-44), which is a **pigment**, as shown by Sobata et al (See column 11, lines 62-63), and curing the applied coating by heat, radiation or simply by air drying to form the corrosion-resistant layer (See column 5, lines 13-14).

Kulkarni fails to teach that the coating mixture comprises at least 20 wt % of the conductive inorganic pigment (Claim 26).

Sobata et al teach that pigments such as aluminum tripolyphosphate pigment (See column 11, lines 62-65) in an amount of 0-70 wt % in combination with electroconductive pigments (See column 12, lines 48-59) increase corrosion resistance of anti-corrosive coating composition (See column 11, lines 58-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used aluminum tripolyphosphate pigment in a coating mixture of Kulkarni together with electroconductive particles to increase corrosion resistance of the coating mixture, as taught by Sobata et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant concentration parameters of a conductive inorganic (including claimed at least 20 wt %) in a method of Kulkarni in view of Sobata et al through routine experimentation in the absence of a showing of criticality.

As to claimed properties, the corrosion-resistant layer in Kulkarni in view of Sobata et al would have claimed properties, i.e. it is firm, hard, tough and slidable (i.e. smooth, see specification, page 4) since the layer is produced by a method identical or substantially identical to that of claimed invention. It is held that where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, *claimed properties or functions are presumed to be inherent.* See MPEP 2111.02, 2112.01. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

As to claim 27, the coating mixture is applied to obtain a layer thickness of *at least* 0.1 mils (2.54 microns) (See column 5, lines 9-11). Thus, a layer thickness of Kulkarni is within claimed broad thickness range of 2-8 microns, as well as within a preferred range of 3-7 microns.

As to claims 28, 30, Kulkarni teaches that it is well known in the art that organic coatings have long been used for corrosion protection due to their barrier properties. Coatings that provide active corrosion inhibition such as zinc rich coatings and chromates, phosphates and the like, have been the mainstay of the industry for many years. The zinc rich coatings provide cathodic protection, while the chromates and phosphates are believed to passivate the metal. Innumerable inorganic pigments and fillers have been so claimed to provide corrosion protection. Multiple coatings are often necessary to overcome non-uniformities and pin holes that are the source of corrosion in organic coatings. See column 1, lines 23-34.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided active corrosion inhibition such as zinc rich coatings and chromates under the organic coating of Kulkarni with the expectation of overcoming non-uniformities and pin holes that are the source of corrosion in organic coatings, well known in the art.

As to claim 29, the coating may be cured by radiation right after applying to the metallic surface (See column 5, lines 13-14). Thermal post-curing is not addressed because it is *optional*.

10. **Claims 27, 28, 30, 32, 33, 35** are rejected under 35 U.S.C. 103(a) as being unpatentable over Bristowe et al (US 4,213,837) in view of Sobata et al (US 4,939,034) and Palm et al (US 3,849,141), further in view of Kulkarni (US 6,054,514).

Bristowe et al in view of Sobata et al and Palm et al fail to teach that both organic coatings and zinc rich coatings or chromates can be used for providing the metallic substrate with active

corrosion inhibition (Claims 28, 30, 33, 35); the coating mixture is applied to obtain a layer thickness of 2-8 microns (Claims 27, 32).

As to claims 28, 30, 33, 35, Kulkarni teaches that it is well known in the art that organic coatings have long been used for corrosion protection due to their barrier properties. Coatings that provide active corrosion inhibition such as zinc rich coatings and chromates, phosphates and the like, have been the mainstay of the industry for many years. The zinc rich coatings provide cathodic protection, while the chromates and phosphates are believed to passivate the metal. Innumerable inorganic pigments and fillers have been so claimed to provide corrosion protection. Multiple coatings are often necessary to overcome non-uniformities and pin holes that are the source of corrosion in organic coatings. See column 1, lines 23-34.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided active corrosion inhibition such as zinc rich coatings and chromates under the organic coating of Bristowe et al in view of Sobata et al and Palm et al with the expectation of overcoming non-uniformities and pin holes that are the source of corrosion in organic coatings, as taught by Kulkarni.

As to claims 27, 32, Bristowe et al further teach that vinyl ester urethanes have unexpected low viscosity (See column 7, lines 30-36), and the amount of vinyl monomer solvent employed can be varied over a wide range depending upon the intended use of the composition (See column 6, lines 63-65). In other words, a coating composition can be diluted to have very low viscosity depending upon the intended use of the composition so that very thin coatings may be achieved.

Kulkarni teaches that anti-corrosive coating mixture can be applied to obtain a layer thickness of *at least* 0.1 mils (2.54 microns) (See column 5, lines 9-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have applied the coating mixture of Bristowe et al in view of Sobata et al and Palm et al to obtain thin layers including layers of *at least* 0.1 mils (2.54 microns) depending upon the intended use of the final product Kulkarni teaches that anti-corrosive coating mixture can be applied to obtain a layer thickness of *at least* 0.1 mils (2.54 microns).

Response to Arguments

11. Applicants' arguments filed March 19, 2004 have been fully considered but they are not persuasive.

(A) Applicants argue that: (i) Bristowe et al do not mention any detail for modifications to generate electroconductive coatings on metallic surfaces that may be used for electric welding; (ii) in contrast to claimed invention, magnetic iron oxide of Bristowe et al may be of low quality, which would not be easily modified to electroconductive coating; (iii) organic coatings of examples 13 and 14 in Bristowe et al are extremely hard and brittle and may be destroyed during metal forming; (iv) organic coatings of examples 13 and 14 in Bristowe et al are thick so that very low load of pigments would generate a high corrosion resistance.

The Examiner respectfully disagrees with this argument.

As to (i), (ii), the features upon which applicant relies (i.e., modifications to generate electroconductive coatings on metallic surfaces that may be used for electric welding) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

As to (iii), (iv), examples 13 and 14 of Bristowe et al do not relate to anti-corrosive coating mixtures.

(B) Applicants argue that Kulkarni doe not teach addition of electroconductive particles.

However, the features upon which applicant relies (i.e., addition of electroconductive particles) are not recited in the rejected claims 26-35, 46-50 (except for newly added dependent claims 55 and 56).

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ETsoy

Elena Tsoy
Examiner
Art Unit 1762

April 20, 2004